

Shock and Arwe HITS HOME



U. S. HEALTH COSTS

OF THE WAR IN IRAQ

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NOVEMBER 2007

ACKNOWLEDGEMENTS

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The military operational costs of the war in Iraq, now greater than \$500 billion¹, have surpassed those for the entire Vietnam conflict. These escalating operational costs are alarming, yet the long-term public health costs will be much greater. Providing medical care and disability benefits to veterans will cost far more than is generally being acknowledged. These costs have been estimated at as much as \$660 billion.² As physicians and health care professionals we are acutely aware of the actual price we are paying in human terms and we are compelled to bring this to the attention of the Congress and the American people.

- **Thousands dead.** The number of fatalities of U.S. military personnel serving in Iraq is approaching 4,000. This does not include journalists and more than 1,000 civilian contractors who have been killed.^{3,4}
- **Tens of thousands wounded.** The total number of US service members wounded, injured, or medically ill in Iraq now exceeds 60,000.⁵ Because of advances in body armor and battlefield medicine, many individuals who would have died in previous conflicts are surviving with grievous injuries. The ratio of wounded in combat to killed is 8:1, compared with 3:1 for the Vietnam War, and 2:1 for World War II. The percentage of injured requiring amputations is the highest seen since the US Civil War.⁶
- **Hundreds of thousands of psychiatric casualties.** It is expected that up to 30 percent of all veterans returning from Iraq will meet criteria for serious mental health disorders.^{7,8} These may take the form of anxiety disorders including posttraumatic stress disorder (PTSD), mood disorders, and substance abuse disorders. A significant fraction of these will be lifelong, chronic afflictions.

BLAST INJURIES AND POLYTRAUMA

As US forces have deployed advanced body armor and armored vehicles, insurgents have utilized powerful car bombs and have increased the power and radius of improvised explosive devices (IEDs). The unexpected consequence of protective body armor paired with increasing explosive force are injuries that leave the torso intact, but produce horrific wounds of arms, legs, face, and head. Currently, 80 percent of combat injuries are caused by IEDs and roadside bombs. These explosive devices commonly produce what is referred to as polytrauma — multiple, severe traumatic injuries. These may include brain and spinal column injuries, amputation of one or more limbs, blindness, hearing loss, burns, and fractures.

Advances in battlefield emergency medicine are another reason for the high survival rates. The extraordinary efficiency of Forward Surgical Teams (FSTs) deploying Rapid Assembly Tents has kept many individuals alive who would have died in previous wars.

The goal of FSTs is damage control; wounds are packed and left open and evacuation to Landstuhl Air Force Base in Germany averages 24 hours. This

contrasts with Vietnam where surgical treatment was done in theater and weeks would elapse before evacuation out of country.

Delayed deaths from polytrauma are not included in Department of Defense figures as “primary battlefield deaths.” Reasons for delayed deaths include sepsis from multiresistant microorganisms caused by blast wounds heavily contaminated by dirt and debris, deep vein thromboses, and pulmonary emboli.

Currently, there are four specialized polytrauma treatment centers in the Department of Veterans Affairs (VA) system and new resources are being developed throughout the country to care for these patients, including over 250 cases of spinal column injury, most of whom are tetraplegic and ventilator-dependent. These multidisciplinary rehabilitation programs are labor-intensive and costly.

POSTTRAUMATIC STRESS DISORDER

Posttraumatic Stress Disorder (PTSD) is the most common mental health disorder diagnosed among returning veterans of the conflicts in Iraq and Afghanistan. PTSD is an injury to the nervous system characterized by alterations in brain function and stress hormone systems. The often bewildering array of symptoms may include nightmares, flashbacks, intrusive memories, avoidance of reminders of the trauma, emotional numbing, social isolation, irritability and anger outbursts, hypervigilance, difficulty with concentration and

“This is a particularly brutal and violent fight and that ferocity needed a new more violent name. ‘Polytrauma,’ in its straightforwardness and simplicity, is precisely that word. Today’s survivors are more damaged — and damaged in more and different ways than anyone had expected — nor had ever seen before.”

RONALD GLASSER, MD⁵

memory, panic-level anxiety, and depression with suicidal ideation. These symptoms severely impact social and occupational functioning and may be profoundly disabling.

The National Center for PTSD uses the conservative figures 12–20 percent for the rate of PTSD expected in veterans returning from Iraq.⁹ Since 1,500,000 service members have been deployed to date, the number of expected cases is therefore in the hundreds of thousands. More than 50,000 returnees already have been treated for PTSD. This represents only a fraction of current incidence, however, since many cases of PTSD have a delayed onset and many individuals with PTSD do not seek care.

A study of more than 100,000 veterans seen at VA health care facilities after returning from Iraq and Afghanistan revealed that 25 percent received mental health diagnoses with the most common diagnosis being PTSD.¹⁰ Of these, 56 percent had two or more mental health diagnoses. The youngest veterans (18–24 years) were more likely to receive a PTSD or mental health diagnosis compared to veterans aged 40 years or older.

The most important factor determining the likelihood of developing PTSD and the severity of PTSD symptoms is the intensity and duration of the trauma. Multiple deployments greatly increase the risk of PTSD and are a cause for grave psychiatric concern. More than 500,000 service members have been deployed multiple times. Many individuals are redeployed who already demonstrate significant symptoms of PTSD. Some are redeployed after they have been prescribed psychiatric medications by the military for various conditions. These individuals are at markedly increased risk for PTSD.

Following their initial deployment it is common in clinical practice to see patients after their initial deployment who have clinically significant symptoms that are subthreshold for a diagnosis of PTSD or who meet criteria for PTSD but still are able to manage fairly well in social and occupational settings. After subsequent deployments they often return with symptoms of far greater severity and concomitant severe impairment in social and occupational functioning. From a psychiatric

standpoint, after redeployment they may never be able to come home again.

Many of those affected are not getting care. Waiting periods of months to see a PTSD specialist are common in some geographic areas. Considerable expertise in PTSD is present within the VA system, but more funding and increased staffing are needed desperately to ensure all veterans receive the care and treatment they deserve.

OTHER MENTAL HEALTH DISORDERS, SUBSTANCE ABUSE, AND SUICIDE

Depressive disorders and anxiety disorders other than PTSD also are highly associated with combat exposure. Substance-use disorders are seen frequently in returning veterans and are present in 50 to 85 percent of those with PTSD.¹² This association is thought to represent self-medication in attempt to control highly distressing symptoms.

Chronic pain syndromes are highly prevalent in veteran populations. Musculoskeletal injuries are among the most common service-connected disabilities. Complex interactions between musculoskeletal injuries and psychiatric conditions result in high utilization of health care services. Chronic pain in veterans is challenging and costly to treat.

Suicide is another example of combat-related mortality not counted as “primary battlefield deaths.” The Army recently has reported that the suicide rate among active duty soldiers in 2006 was the highest in 26 years of record-keeping.¹³ The

“Such unhealed PTSD can devastate life and incapacitate its victims from participation in the domestic, economic, and political life of the nation. The painful paradox is that fighting for one’s country can render one unfit to be its citizen.”

JONATHAN SHAY, MD¹¹

report cited failed personal relationships, legal and financial problems, and the stress of their jobs as precipitating factors. There was a significant relationship between suicide attempts and length of deployment.

A recent prospective study used data from the 1986–1994 National Health Interview Survey to assess the risk of suicide among veterans in the general U.S. population.¹⁴ The study tracked 320,890 men, of whom 104,026 had served in the U.S. military between 1917 and 1994. Veterans were twice as likely to die of suicide compared with non-veterans in the general population.

TRAUMATIC BRAIN INJURY

Traumatic brain injury (TBI) is receiving increasing attention as a “signature wound” of this conflict.¹⁵ TBI may be penetrating or closed. Closed head injuries are more common in the current conflict, as helmets may protect the head from projectiles, but not from a blast wave. TBI is classified as mild, moderate, or severe depending on the duration of loss of consciousness and length of posttraumatic amnesia.

It is estimated that as many as 30 percent of injured soldiers have suffered some degree of TBI. Explosion or blast injury is the most common cause of TBI for service members in Iraq. Other causes are motor vehicle accidents, falls, and gunshot wounds. Primary blast wave injury is caused by atmospheric pressure changes. Damage to hollow internal organs including ears, lungs, and gastrointestinal tract is well documented. Damage to the brain, however, is poorly understood. Research is critically needed in this area.

Severe TBI may result in profound disability, in the worst cases a persistent vegetative state. Mild cases may suffer from physical symptoms such as headache and dizziness, cognitive deficits, and behavioral problems. Sophisticated neuropsychological testing is needed to assess accurately changes in neurological function. Like PTSD, mild TBI may be a hidden wound. Substantial education of both clinicians and the public is needed in order for these disorders are recognized and treated adequately.

The differential diagnosis between PTSD and TBI is problematic and many individuals are being seen that have both conditions. A number of key symptoms are common to both PTSD and TBI, most notably difficulty controlling anger, difficulty with concentration and memory, anxiety, and depression. Sudden outbursts of rage, for example, can be especially challenging to treat when both conditions are present.

SOCIAL PROBLEMS

The trauma of war has profound long-term consequences that extend beyond the individuals who fight. Families, communities, and the nation as a whole are impacted by the war in Iraq. Unemployment, divorce, family violence, behavior problems in children, and incarceration are some of the social ills that are associated with combat exposure.

Poor occupational and social functioning is a hallmark of chronic PTSD. Difficulty maintaining employment is typical among veterans with PTSD. The hyperalertness and outbursts of anger that are core symptoms of PTSD result in difficulty getting along with coworkers and supervisors. Concentration deficits affect the ability to complete tasks. In Vietnam veterans, the presence of PTSD significantly lowers the likelihood of working and significantly decreases hourly wages for those who are working.¹⁶

Veterans with PTSD have much higher rates of marital, parental, and family adjustment problems than veterans without PTSD.¹⁷ Combat exposure overshadows the effect of any other variable that might predispose to family problems. Rates of interpersonal violence in both active duty and veteran populations are up to three times greater than in civilian populations.¹⁸ The high levels of family violence, distress in spouses or partners, and behavioral problems in children that have been consistently seen in Vietnam veterans are now evident in Iraq veterans.

Using data from the National Comorbidity Survey (1990–1992) that are representative of the entire U.S. population, it has been demonstrated that 9 percent of all unemployment, 8 percent of

all divorce or separation, and 21 percent of all spouse or partner abuse is attributable to combat exposure.¹⁹ This represents the extent that our society is damaged by its engagement in war. The economic cost of lives ruined and families destroyed may be difficult to quantify, but it is undeniably profound.

COST PROJECTIONS

In addition to the more evident costs of providing medical care to veterans, compensation for disability resulting from military service is a significant long-term cost of war.

Currently a U.S. veteran (without spouse or dependents) who is 100 percent disabled and unemployed receives compensation payments from the VA of \$2,471 per month. During a 50-year period, this could total more than \$1.4 million for one individual, without adjustment for inflation. The annual budget for the VA Benefits Administration is actually greater than that for the VA Health Administration.

Harvard economist Linda Bilmes has estimated the costs of providing medical care and disability benefits payments for veterans of this war utilizing three scenarios. The estimates range from \$350 billion to \$660 billion.² It already is clear that actual costs will fall toward the upper end of the range. For example, the high cost scenario assumes that 2,000,000 unique individuals are deployed through the duration of the conflict. If current policies continue, there is little doubt that this figure will be reached or even exceeded. Furthermore, the study likely underestimates the true costs for a variety of reasons.

“The cost of war is often measured in the physical destruction...in the number of dead. But probably worse is the psychological and spiritual toll. This cost takes generations to heal. It cripples and perverts whole societies...”

CHRIS HEDGES²⁰

- **Delayed onset of PTSD.** Chronic PTSD often has a delayed onset. Valid first-time disability claims for PTSD frequently are filed many years after military service. The stigma of mental illness is a barrier to seeking care that also results in delayed costs. Nearly half of all claims for increased rating level are from veterans of World War II, Korea, and Vietnam. Disability compensation for PTSD alone increased from \$1.72 billion in 1999 to \$4.28 billion in 2004.²¹ As a society, we still are actively suffering from and paying the price for all the wars of the past century.
- **Multiple deployments.** The unprecedented multiple deployments increase the risk of all conditions related to trauma exposure, most notably PTSD. These veterans will be sicker and will have more social problems, greatly expanding the ultimate costs to society.
- **Health care utilization.** The Bilmes estimate assumes that only half of veterans will seek care from the VA and that utilization of services will be similar to that for veterans of the first Gulf War. The current policy of providing free medical care for two years following discharge may lead to an increased percentage of veterans receiving care through the VA system. The rate of severe injuries and disabilities is clearly greater than that for the first Gulf War and the costs of treating these veterans may well be higher.
- **Civilian contractors.** Private contractors hired by the Defense Department have suffered casualties similar to their military counterparts in high numbers. There is a paucity of information about this population, though more than 1,000 Labor Department death benefit claims have been filed and thousands have been wounded. Tens of thousands of psychiatric casualties are evident. There is no routine screening for this population and many serious conditions are going undiagnosed. There is a shortage of mental health professionals in the private sector trained to deal with combat PTSD. Numerous denials of PTSD claims from private insurers have been reported.
- **Benefits crisis.** The VA has a current backlog of more than 400,000 disability claims and this is expected to increase with the influx of veterans returning from service in Iraq. The system takes an average of six months to process an initial claim and nearly two years to process an appeal. The disability rating schedule is complex and confusing, with no guiding philosophy and poorly defined objectives. There is little relationship to current concepts of quality of life or loss of earnings. The Institute of Medicine of the National Academy of Sciences²¹ and the Presidential Commission on Care for America's Returning Wounded Warriors, co-chaired by Bob Dole and Donna Shalala,²² recently issued reports, both of which conclude that the benefits system is failing and needs to be completely overhauled.

END THE WAR NOW

The costs of providing health care and disability benefits for veterans are not accounted for fully when weighing decisions to use military force. More profound social costs such as unemployment, divorce, and family violence are rarely considered. If these costs were truly and widely understood, nations might be much more reluctant to use war as a means to settle international conflict.

The magnitude of the long-term health costs of the war in Iraq is staggering. The supposed benefits of our sustained presence are vague and ever-changing. **Every day of continued fighting adds to the terrible price that we are paying.** This report considers only the costs we bear at home in the U.S. The devastating health consequences of the war on the civilian population of Iraq will be the subject of a subsequent report.

Physicians for Social Responsibility urges you to join us in our call to end the war in Iraq.

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WHO IS PSR?

Guided by the values and expertise of medicine and public health, Physicians for Social Responsibility works to protect human life from the gravest threats to health and survival. PSR is a nonpartisan, nonprofit organization representing 26,000 physicians, public health professionals, and concerned citizens working to eliminate nuclear weapons and address the public health and environmental legacy created by our military and civilian nuclear enterprise, including the testing, production and stockpiling of nuclear weapons. Since its founding forty-five years ago, PSR has dedicated its efforts to educating the medical and public health community, the public, policymakers and the media about the menace of accidental or intentional nuclear war and proliferation of nuclear weapons and materials.

PSR also has a long history of bringing to light the fallacy of U.S. nuclear weapons policy and inadequacy of U.S. public health infrastructure in responding to a full-scale nuclear war scenario. Throughout the Cold War years, PSR physicians published articles and studies in medical journals, such as the *New England Medical Journal* and the *Journal of American Medical Association*, detailing the medical consequences of a nuclear war between the United States and the Soviet Union. Through research, public education and advocacy, PSR, with our international federation the International Physicians for the Prevention of Nuclear War, highlighted the health effects associated with testing, production and stockpiling of nuclear weapons and the nation's continued reliance on nuclear weapons and nuclear power. This work was recognized globally when IPPNW was awarded the Nobel Peace Prize in 1985, in which PSR shared.

Over the last two decades, PSR's work has focused on educating the public and policy makers about the continuing threat of nuclear proliferation and the health legacies of nuclear weapons build-up during the Cold War. PSR continues to advocate for rapid reduction and eventual elimination of U.S. and global nuclear stockpiles — ultimately the only sure way to eliminate the threat of the use of nuclear weapons whether by an adversary state or by a terrorist group.

Recognizing that new dangers now threaten us, PSR in 1992 expanded its mission to include environmental health, addressing issues such as global climate change, proliferation of toxics, and pollution.

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